The listing of claims will replace all prior versions, and listings, of claims in the application:

We Claim:

1. (Currently Amended) A device comprising:

a frame ~~having a base~~ having a number of recesses in which a number of planar substrates can fit side by side; said frame is characterized as a tool for interrogation of ~~individual~~ substrates in a ~~plate~~ microplate format.

2. (Original) The device according to claim 1, wherein each of said recesses is defined by a sidewall.

3. (Currently Amended) The device according to claim 1, wherein said ~~slide-holder~~ frame can accommodate four (4) microscope slides.

4. (Currently Amended) The device according to claim 3, wherein said four slides in combination forms ~~a virtual~~ an area equivalent to the footprint of an industry standard microplate ~~with an industry-standard footprint~~.

5. (Currently Amended) A platform for performing high-throughput interrogation of biological, biochemical, or chemical assays, the device comprising: a frame ~~having a base~~ with recesses that can accommodate a number of planar substrates; said frame is characterized as a tool for either: a) performing multiple, discrete assays on an individual substrate, b) determining relative quality of said substrates, c) screening of materials that have optical

properties; and said frame is designed to work in conjunction with a plate-reader or a scanner adapted for microplates.

6. (Currently Amended) The device according to claim 5, wherein said ~~slide-holder~~ frame can accommodate four (4) microscope slides.

7. (Original) The device according to claim 5, wherein a surface property of each substrate can be configured in an 8 x 12 matrix according to a 96-well foot-print.

8. (Original) The device according claim 5, wherein a surface property of each substrate can be configured in a 16 x 24 matrix according to a 384-well foot-print.

9. (Currently Amended) The device according to claim 5, wherein a surface property of each substrate can be configured in a 32 x 48 ~~12 x 36~~ matrix according to a 1536-well foot-print.

10. (Withdrawn) A method performing assays, the method comprising:

a) either prepare at least a set of samples on a major surface of a slide, or providing a slide already with prepared samples;

b) providing a frame having a base in which a number of microscope-sized slides can fit side by side;

c) placing said prepared slide into a recess in said base of said device;

d) loading either biological analytes or chemical reagents onto each slide;

e) performing an assay;

f) placing said frame and slides in a plate-reader.

11. (Withdrawn) The method according to claim 10, wherein said samples can be all of the same material or each of a different material.

12. (Withdrawn) The method according to claim 10, further comprises viewing and analyzing the results of said assay.

13. (Withdrawn) The method according to claim 10, wherein in each slide has sections arranged in a 3 x 8 matrix.

14. (Withdrawn) The method according to claim 10, wherein in each slide has sections arranged in a 6 x 16 matrix.

15. (Withdrawn) The method according to claim 10, wherein in each slide has sections arranged in a 12 x 36 matrix.

16. (Withdrawn) The method according to claim 10, wherein said frame said frame is characterized as a tool for either: a) determining the quality of surface chemistry on a substrate, b) determining the uniformity of said surface chemistry, or c) screening of materials that have optical properties; and said frame is designed to work in conjunction with a plate-reader.

17. (Withdrawn) A method of determining the quality of a reactive chemistry on a substrate, the method comprising:

a) providing a planar substrate having a surface chemistry;

b) treating said substrate to make said surface chemistry detectable

c) providing a device that comprises: a slide-holder having a base with recesses that can accommodate a number of planar substrates;

d) assembling said planar substrate in said device;

e) detecting a signal using a plate-reader.

18. (Withdrawn) The method according to claim 17, wherein said samples are all of the same material or each of a different material.

19. (Withdrawn) The method according to claim 17 further comprises analyzing the results of said assay.

20. (Withdrawn) A method of determining the uniformity of a substrate material on a solid support, the method comprising:

a) providing a planar substrate having a chemical, porous or membrane surface;

b) treating said substrate to make said surface detectable, or defining a light source;

c) providing a device that comprises: a slide-holder having a base with recesses that can accommodate a number of planar substrates;

d) assembling said planar substrate in said device;

e) detecting a signal using a plate-reader.

21. (Withdrawn) The method according to claim 20, wherein said samples are all of the same material or each of a different material.

22. (Withdrawn) The method according to claim 20, further comprises analyzing the results of said assay.

23. (Withdrawn) A method of screening materials that have optical properties, the method comprising:

a) providing a planar substrate;

b) treating, if necessary, said substrate to make said substrate detectable;

c) providing a device that comprises: a slide-holder having a base with recesses that accommodate a number of planar substrates;

d) assembling said planar substrate in said device;

e) detecting a signal using a plate-reader.

24. (Withdrawn) The method according to claim 23, wherein said method includes defining a light source.

25. (NEW) The device according to claim 1 wherein said frame further comprises a spring for each of said number of recesses for tightening a planar substrate at its location.

26. (NEW) The device according to claim 1 wherein said frame further comprises a slot for each of said number of recesses for loading and removing said planar substrates.